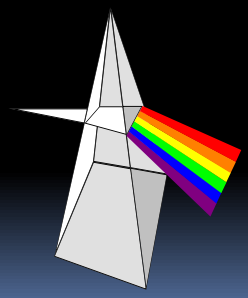
INTRO TO FLAME TESTS!

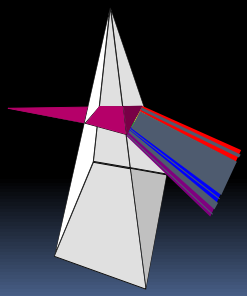
Atomic Spectra

- White light is made up of all the colors of the visible spectrum.
- Passing it through a prism separates it.



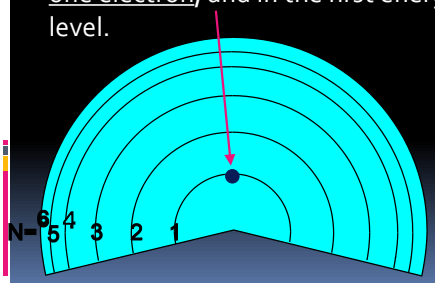
If the light is not white

- By heating a gas with electricity we can get it to give off colors.
- Passing this light through a prism does something different.



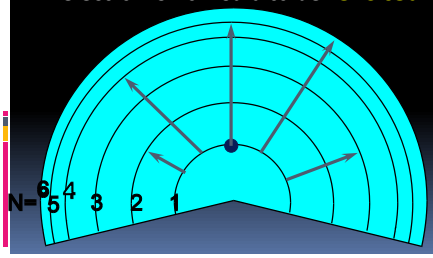
Changing the energy

- Let's look at a hydrogen atom, with only one electron, and in the first energy level.



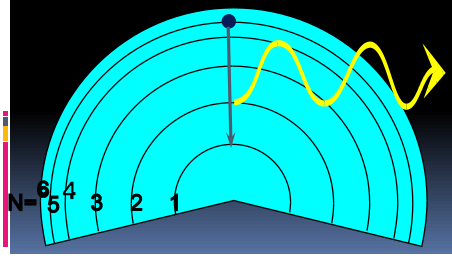
Changing the energy

- Heat, electricity, or light can move the electron up to different energy levels. The electron is now said to be "excited"



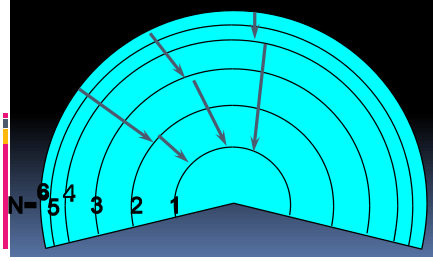
Changing the energy

- As the electron falls back to the ground state, it gives the energy back as light



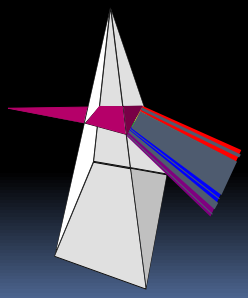
Changing the energy

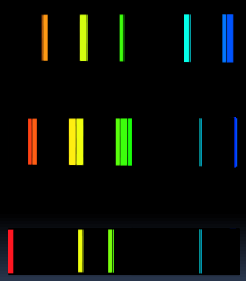
- They may fall down in specific steps
- Each step has a different energy



Atomic Spectrum

- Each element gives off its own characteristic colors.
- Can be used to identify the atom.





- These are called the ***atomic emission spectrum***
- Unique to each element, like fingerprints!
- Very useful for identifying elements